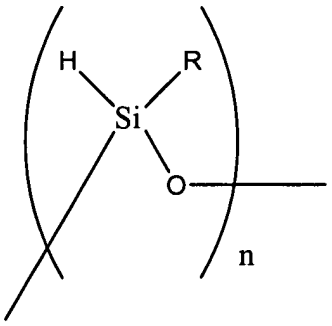
OIPE MAR 30 2006 PATENT & TRADEMARK OFFICE

AMENDMENT TO CLAIMS

This version of claims will replace all prior versions and listings of claims.

1. (Currently Amended) A method for improving the fray resistance of a suture comprising at least one filament, the method comprising:

applying a coating to at least a portion of a surface of the at least one filament of the suture by a plasma polymerization process of a hydrocyclosiloxane monomer of the general formula



where R is an aliphatic group and n is an integer from 2 to about 10~~, preferably 4 to 6~~.

2. (Original) The method according to claim 1 wherein the hydrocyclosiloxane monomer is selected from the group consisting of 1,3,5,7-tetramethylcyclotetrasiloxane; 1,3,5,7,9-pentamethylhydrocyclopentasiloxane; 1,3,5,7,9,11-hexamethylhydrocyclohexasiloxane and a mixture of 1,3,5,7,9-pentamethylcyclopentasiloxane and 1,3,5,6,9,11-hexamethylcyclohexasiloxane monomers.

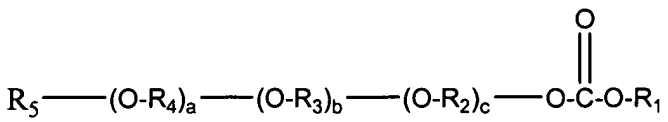
3. (Original) The method according to claim 1 wherein the coating further comprises an amine group that has been introduced onto the coating by plasma polymerization of a gas containing a monomer selected from the group consisting essentially of unsaturated N-protected amines, unsaturated N-unprotected amines, N-protected cyclic aliphatic amines, and N-unprotected cyclic aliphatic amines, to produce an amine grafted polymer coating.

4. (Original) The method according to claim 3 wherein the unsaturated or cyclic amine is copolymerized with the hydrocyclosiloxane monomer onto the surface of the at least one filament of the suture.

5. (Original) The method according to claim 3 wherein the unsaturated or cyclic amine is plasma grafted onto the coating on the surface of the at least one filament of the suture.

6. (Original) The method according to claim 3 wherein said unsaturated or cyclic amine is N-trimethylsilylallylamine.

7. (Original) The method according to claim 3 wherein a carbonate-based polyalkylene oxide compound is contacted with the amine grafted polymer coating to produce a polyoxyalkylene modified polymer coating, the carbonate-based polyalkylene oxide compound comprising the general formula



wherein R_1 is selected from an N-benzotriazole group, an N-2-pyrrolidinone group, or a 2-oxypyrimidine group; R_2, R_3 and R_4 are independently selected alkylene groups of about 2 to about 3 carbon atoms and may be the same or different; R_5 is selected from hydrogen, methyl, a carbonyloxy-N-benzotriazole group, a carbonyloxy-N-2-pyrrolidinone group, and a carbonyl-2-oxypyrimidine group; a is an integer from 1 to 1000 and each of b and c is an integer from 0 to 1000, where a+b+c is an integer from 3 to 1000.

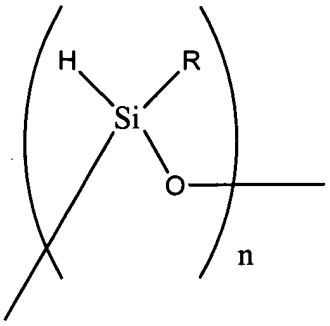
8. (Original) The method according to claim 7 wherein said carbonate-based polyalkylene oxide compound is polyoxyethylene bis-(N-hydroxybenzotriazolyl) carbonate.

9. (Original) The method of claim 1 wherein the suture comprises at least one polypropylene fiber.

10. (Currently Amended) A method for making a coated suture comprising:

providing a suture comprising at least one filament having a surface; and

applying a coating to at least a portion of the surface of the at least one filament of the suture by a plasma polymerization process of a hydrocyclosiloxane monomer of the general formula



where R is an aliphatic group and n is an integer from 2 to about 10~~, preferably 4 to 6~~.

11. (Original) The method according to claim 10 wherein the hydrocyclosiloxane monomer is selected from the group consisting of 1,3,5,7-tetramethylcyclotetrasiloxane; 1,3,5,7,9-pentamethylhydrocyclopentasiloxane; 1,3,5,7,9,11-hexamethylhydrocyclohexasiloxane and a mixture of 1,3,5,7,9-pentamethylcyclopentasiloxane and 1,3,5,6,9,11-hexamethylcyclohexasiloxane monomers.

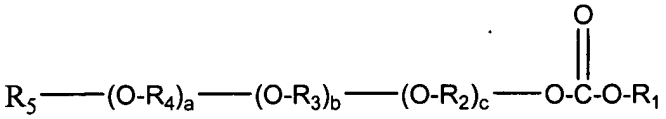
12. (Original) The method according to claim 10 wherein the coating further comprises an amine group that has been introduced onto the coating by plasma polymerization of a gas containing a monomer selected from the group consisting essentially of unsaturated N-protected amines, unsaturated N-unprotected amines, N-protected cyclic aliphatic amines, and N-unprotected cyclic aliphatic amines, to produce an amine grafted polymer coating.

13. (Original) The method according to claim 12 wherein the unsaturated or cyclic amine is copolymerized with the hydrocyclosiloxane monomer onto the surface of the at least one filament of the suture.

14. (Original) The method according to claim 12 wherein the unsaturated or cyclic amine is plasma grafted onto the coating on the surface of the at least one filament of the suture.

15. (Original) The method according to claim 12 wherein said unsaturated or cyclic amine is N-trimethylsilylallylamine.

16. (Original) The method according to claim 12 wherein a carbonate-based polyalkylene oxide compound is contacted with the amine grafted polymer coating to produce a polyoxyalkylene modified polymer coating, the carbonate-based polyalkylene oxide compound comprising the general formula



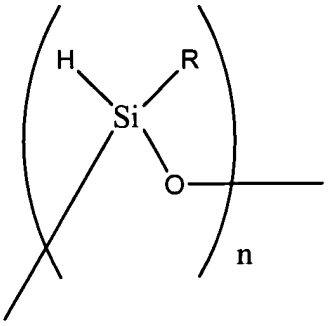
wherein R_1 is selected from an N-benzotriazole group, an N-2-pyrrolidinone group, or a 2-oxypyrimidine group; R_2, R_3 and R_4 are independently selected alkylene groups of about 2 to about 3 carbon atoms and may be the same or different; R_5 is selected from hydrogen, methyl, a carbonyloxy-N-benzotriazole group, a carbonyloxy-N-2-pyrrolidinone group, and a carbonyl-2-oxypyrimidine group; a is an integer from 1 to 1000 and each of b and c is an integer from 0 to 1000, where a+b+c is an integer from 3 to 1000.

17. (Original) The method according to claim 16 wherein said carbonate-based polyalkylene oxide compound is polyoxyethylene bis-(N-hydroxybenzotriazolyl) carbonate.

18. (Withdrawn) A suture comprising:

at least one filament; and

a coating formed on at least a portion of a surface of the at least one filament by a plasma polymerization process wherein a polymer coating is formed on the filament surface from a hydrocyclosiloxane monomer of the general formula



where R is an aliphatic group and n is an integer from 2 to about 10, preferably 4 to 6.

19. (Withdrawn) A suture according to claim 18 wherein the hydrocyclosiloxane monomer is selected from the group consisting of 1,3,5,7-tetramethylcyclotetrasiloxane; 1,3,5,7,9-pentamethylhydrocyclopentasiloxane; 1,3,5,7,9,11-hexamethylhydrocyclohexasiloxane and a mixture of 1,3,5,7,9-pentamethylcyclopentasiloxane and 1,3,5,6,9,11-hexamethylcyclohexasiloxane monomers.

20. (Withdrawn) A suture according to claim 18 wherein the at least one filament is made from a synthetic, absorbable polymer composition.

21. (Withdrawn) A suture according to claim 18 wherein the at least one filament is made from a synthetic, non-absorbable polymer composition.

22. (Withdrawn) A suture according to claim 21 wherein the synthetic, non-absorbable polymer composition comprises one or more materials selected from the group consisting of nylon and polypropylene.

23. (Withdrawn) A suture according to claim 20 wherein the synthetic, absorbable polymer composition comprises a homopolymer or copolymer derived from one or more monomers selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, dioxanone, caprolactone, polycaprolactone, epsilon-caprolactone, trimethylene carbonate.

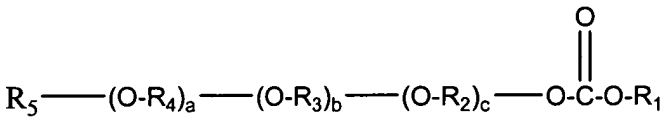
24. (Withdrawn) The suture of claim 18 wherein the coating further comprises an amine group that has been introduced onto the coating by plasma polymerization of a gas containing a monomer selected from the group consisting essentially of unsaturated N-protected amines, unsaturated N-unprotected amines, N-protected cyclic aliphatic amines, and N-unprotected cyclic aliphatic amines, to produce an amine grafted polymer coating.

25. (Withdrawn) The suture of claim 24 wherein the unsaturated or cyclic amine is copolymerized with the hydrocyclosiloxane monomer onto the surface of the at least one filament of the suture.

26. (Withdrawn) The suture of claim 24 wherein the unsaturated or cyclic amine is plasma grafted onto the coating on the surface of the at least one filament of the suture.

27. (Withdrawn) The suture of claim 24 wherein said unsaturated or cyclic amine is N-trimethylsilylallylamine.

28. (Withdrawn) The suture of claim 24 wherein a carbonate-based polyalkylene oxide compound is contacted with the amine grafted polymer coating to produce a polyoxyalkylene modified polymer coating, the carbonate-based polyalkylene oxide compound comprising the general formula



wherein R_1 is selected from an N-benzotriazole group, an N-2-pyrrolidinone group, or a 2-oxypyrimidine group; R_2, R_3 and R_4 are independently selected alkylene groups of about 2 to about 3 carbon atoms and may be the same or different; R_5 is selected from hydrogen, methyl, a carbonyloxy-N-benzotriazole group, a carbonyloxy-N-2-pyrrolidinone group, and a carbonyl-2-oxypyrimidine group; a is an integer from 1 to 1000 and each of b and c is an integer from 0 to 1000, where a+b+c is an integer from 3 to 1000.

29. (Withdrawn) The suture of claim 28 wherein said carbonate-based polyalkylene oxide compound is polyoxyethylene bis-(N-hydroxybenzotriazolyl) carbonate.